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## Amendments to the Claims:

Please amend the claims as follows, and cancel without prejudice claims marked as cancelled.

1. (Currently Amended) A system for in vivo detection of H. pylori, the system emprising comprising:

an autonomous in vivo sensing device configured for sensing in vivo pH and for transmitting in vivo data to a receiving unit; unit, said sensing device comprising an imager; and an external receiving unit configured for indicating an in vivo pH about equal or larger than 5.5, based on the transmitted in-vivo data.

- 2.. (Cancelled)
- 3. (Currently Amended) The system according to claim 1 wherein the <u>external receiving</u> unit is configured for indicating an in vivo pH about equal or larger than 5.5 sensing device includes an image sensor
- 4 (Cancelled)
- 5. (Original) The system according to claim 1 wherein the sensing device includes pH indicator.
- 6 (Original) The system according to claim 5 wherein the pH indicator is a color changing indicator.
- 7. (Cancelled)
- 8 (Original) The system according to claim 6 wherein the pH indicator is attached to an optical window in the sensing device.
- 9. (Original) The system according to claim 6 wherein the pH indicator is immobilized within a sampling chamber in the sensing device.
- 10. (Cancelled)
- 11. (Original) The system according to claim 1 wherein the sensing device comprises a radio frequency transmitter.
- 12. (Original) The system according to claim 1 wherein the sensing device comprises a power source.
- 13. (Cancelled)

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- 14. (Original) The system according to claim 1 wherein the receiving unit is configured for receiving radio frequency signals.
- 15 (Original) The system according to claim 1 wherein the receiving unit comprises a display configured for displaying transmitted in vivo data.
- 16. (Cancelled)
- 17. (Currently Amended) A system for in vivo detection of H. pylori, the system comprising comprising:

an autonomous in vivo pH sensing device, said device comprising <u>an imaging system and</u> a transmitter;

an external receiving unit; and

a processor configured for identifying changes in pH over a predetermined threshold.

- 18. (Currently Amended) The system according to claim 17 wherein the predetermined threshold includes a pH change of about 2.5 units.
- 19. (Original) The system according to claim 17 further comprising a display.
- 20. (Cancelled)
- 21. (Cancelled)
- 22. (Original) A method for in vivo detection of H. pylori, the method comprising sensing pH in at least one location proximate to a patient's stomach mucus; and transmitting by radio frequency pH data to an external receiving unit.
- 23. (Original) The method according to claim 22 further comprising indicating a pH value which is about equal to or exceeds a predetermined threshold.
- 24. (Original) The method according to claim 22 wherein sensing pH is by imaging a color changing pH indicator.
- 25. (Currently Amended) The method according to claim 23 wherein the <del>predetermined</del> threshold pH value is about 5.5.
- 26. (Cancelled)
- 27. (Currently Amended) A method for in vivo detection of H. pylori, <u>The method according to claim 23</u>, the method comprising comprising:

inserting an autonomous pH sensing device into a patient's stomach;

positioning the patient to achieve substantially covering of the patient's stomach body; and

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receiving in vivo data.

28-29. (Cancelled)